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# Ceramics

MONTHLY

MARCH 1954

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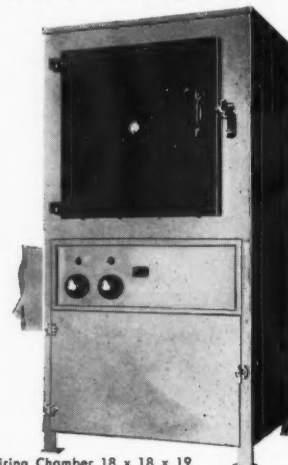


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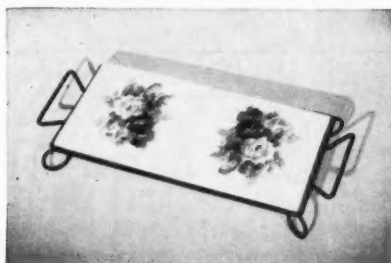
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6—\$6.00 ea.—\$36.00 (6)

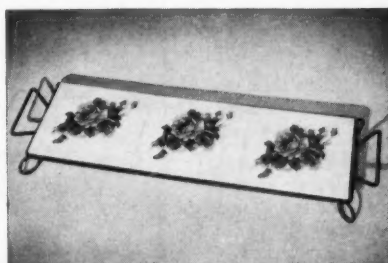
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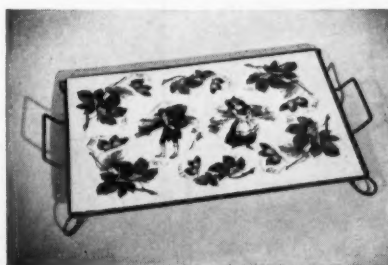
D. TRAY—2 tiles 12" long, 6" wide



E. TRAY—3 tiles 18" long, 6" wide



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G. TRAY—6 tiles 18" long, 12" wide



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**TRIVETS AND TRAYS SHIPPED FREE ANYWHERE IN THE UNITED STATES. YOU PAY NO POSTAGE CHARGES.**  
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CERAMICS MONTHLY



# Ceramics

## MONTHLY

Volume 2, Number 3

MARCH • 1954

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### a letter from the editor

#### Dear Reader

He that publishes a book runs a very great hazard, since nothing can be more impossible than to compose one that may secure the approbation of every reader.

—Cervantes

We have often requested your comments and suggestions to aid us in planning our editorial course. Your response has been really gratifying, and you have been most helpful.

The new feature, "Ceramic Counsel," which starts in this issue, grew from the many letters which asked for the "why" in addition to the "how" of ceramics. Certainly a healthy sign—and we asked our Edgar Littlefield to prepare a series of monthly items covering, from a theoretical point of view, the most often asked questions.

In April, another new monthly feature will be introduced, in response to those whose primary ceramic interest is in overglaze decorating. This "department" will be handled by Zena Holst of Salt Lake City who has studied and taught decorating and design for almost forty years, and Carlton Atherton who is professor of Fine Arts at Ohio State University. We're convinced they know all the answers.

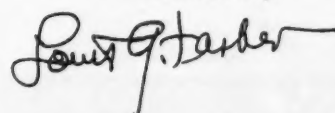
Enamelists, too, will be served soon with frequent instructive and general interest articles. (We've been scolded too many times for seeming to overlook this important section of the ceramic family.)

Ralph Waldo Emerson said that "by necessity, by proclivity, and by delight, we all quote," which prompts me to quote him:

A man builds a fine house; and now he has a master, and a task for life; he is to furnish, watch, show it, and keep it in repair the rest of his days. —Emerson

We are happy to bow to the master and accept the task for life—if you will continue to help us build our house. You can do it by writing when you think we are off base and when you think we are on the right track. With your help, we might even prove Cervantes wrong.

Yours sincerely,





## PADDY SAYS

"Begorra, ye don't need a  
four-leaf clover for luck,  
what YOU need is

## VELVA PLY

That wonderful one-fire glaze that's  
got the luck o' the Irish in every bottle,  
bejabbers.

Sure an' there's 80 colors as sweet as  
the Rose of Tralee, and if'n ye haven't  
tried 'em yet ye'll never be knowin'  
how GOOD a glaze can be until ye've  
had VELVA-PLY.

And the price, me bonny colleens, is  
as light as the lilt of a song—40, 60  
and 75c for FOUR FULL OUNCES  
ye'll be gettin', and whether it's one  
or a hundred ye'll be buyin', ye'll find  
the Blarney Stone ain't in it fer LUCK.  
They're bloomin' fine glazes, THAT'S  
WHAT.

Now mind what oim tellin' ye and send  
for YOUR trial kit of 6 gorgeous colors  
TODAY. Only \$3.50 plus postage, me  
beauties. (80c west, 60c east, of the  
Mississippi). Remember, there's NO  
glaze like VELVA-PLY fer GOOD  
LUCK and GOOD GLAZIN'." You  
can take it from Paddy, he KNOWS.  
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**HOUSE OF GLAZES**  
The Usual and Unusual

# letters

## Where's Henry?

Gentlemen:

... I wait with bated breath for each  
issue ... I also search with similar anxiety  
for the articles of Henry Bollman. The  
five articles of his you ran last year were  
choice. While I do not know Mr. Bollman,  
his unaffected wit and profound under-  
standing ... make me wish I did.

(MRS.) JEANNE M. BOORDA

South Bend, Ind.

◆ He'll be back soon. His latest effort is  
the life of Josiah Wedgwood.—Ed.

## The Luster Fuss

Gentlemen:

... I hope Mrs. Pruden wasn't as upset  
by the Koch letter ("Letters," Jan.) as I  
was. Certainly the writer was speaking only  
for herself, or at best, a minute minority  
of "purists."

I would like to express my sincere grati-  
tude and appreciation to Mrs. Pruden for  
her excellent articles. They could not have  
been written in a clearer, more concise  
manner ...

WILLIAM SIMPSON

Chicago, Ill.

Gentlemen:

... I have seen Persian lusters in mu-  
seums. They are gorgeous things, indeed!  
But if modern chemists and scientists can  
come up with jars of liquid that don't re-  
quire reduction firing, far be it from me or  
anyone else to scorn them because they  
aren't achieved in the same laborious way  
as were those of the ancients ...

Does the "3-D" (disturbed, discouraged,  
and disappointed) ceramist scorn all contri-  
butions of modern science? I'll wager she  
has used a gas or oil-fired kiln, or worse  
yet, an electric kiln ...

LYNN WARREN

Niagara Falls, N. Y.

Gentlemen:

I must agree with Dr. Koch's comments  
on the initial article on lusters. The nega-  
tive, condescending tone of the piece was  
disturbing; yet this and the rest of the series  
contained the specific information so neces-  
sary to good "how to" articles ...

(MRS.) JOHN GALE

Indianapolis, Ind.

Gentlemen:

... The Editor's comment was too mild;  
however, you raised a good point. Many  
beautiful works of art are being contributed  
by modern enamelists, which I doubt would  
be the case if each enameler had to smelt  
and grind his own enamel frits ...

Beauty in a piece of ceramics is not di-  
rectly related to the time and effort that  
went into its making. If a pot (or decora-  
tion on a square tile, for that matter) is  
beautiful, it is because of the talent and  
sincerity of the artist ... A sincere artist  
today can make a pot that will rival any  
museum piece—yes, using commercially pre-  
pared materials, too!

CLARA MOORE

New Orleans, La.

## The Sills: an Appreciation

Gentlemen:

We speak up [belatedly] to agree that  
John and Esther Sills truly represent Ameri-  
can traditional potters today ("Letters,"  
October.) They have a deep understanding

of the true meaning of pottery making—a  
meaning which makes a potter humble him-  
self before the clay on which he works ...  
The Sills know the humility which is found  
only in the sweat of hard labor—digging of  
clay—preparing it—then throwing beautiful  
shapes on the wheel. We are delighted to  
agree that this good couple represents "the  
American potter" with their healthy in-  
terests in music, animal and human life,  
their willingness to work hard, to throw off  
life's non-essentials; their wonderful determi-  
nation to develop a style of decoration that  
keeps them true to themselves without suc-  
cumbing to the pitfalls of a cliché ...

(Mr. & Mrs.) C. C. GIORGI

Cleveland, Ohio

## Tempus is Fugiting

Gentlemen:

... Thanks for a swell magazine. ... My  
really big squawk is that there are so darn  
many things I want to do and try I will  
never catch up. I discovered potting only a  
couple of years ago; I will be sixty years  
old in June, so you see I have to step on  
it ...

HAROLD HAYES

Buffalo, N. Y.

## Traveler's Aid

Gentlemen:

The requests by prospective travelers for  
information on pottery locations can be very  
well taken care of if the hegira "abroad" is  
on our own continent—Nova Scotia.

The Provincial government issues a  
pamphlet every year called "Handcrafts in  
Nova Scotia." It lists the craft workers in  
that province and is available free of charge  
by writing to Handcrafts Centre, 320 Young  
St., Halifax, Nova Scotia.

In the foreword is something all of us  
could very well bear in mind: "Handcrafts  
in common with all creative expression give  
a sense of order and truth and must be as-  
sociated in our minds with dignified pieces  
of work such as a fine rug, bowl or chair  
and not as a conglomeration of small useless  
objects and novelties ..."

(MRS.) CLAYTON A. LANE

Niagara Falls, N. Y.

## Mirror Image?

Gentlemen:

... I don't think the October cover is  
so bad ("Letters," Jan.) ... Is it unusual  
for humans to begin to look like something  
they really love, even if it is a pot? ...

PEGGY TATAKIS

Chicago, Ill.

## Heads by Wheeler

Gentlemen:

In the January issue, Mr. Kenny showed  
us how Sculptor Cavalitto makes a portrait  
in clay, and this was very helpful. But no-  
one told us *who* made the beautiful collec-  
tion of heads [children, women, a horse]  
that were in the picture at the beginning  
of the article. Were they the work of Mr.  
Kenny? ...

MARY O'SHAUGHNESSY

New Brunswick, N. J.

◆ Our face is red and we're sorry we failed  
to give credit. The heads you refer to were  
the work of the well-known sculptor  
Wheeler Williams. Our apologies go to both  
Mr. Kenny and Mr. Williams for the over-  
sight.—Ed.

# PARAGON KILNS For YOUR Firing PLEASURE

- Simplicity of Control
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- Economy of Operation
- Perfect Adaptability



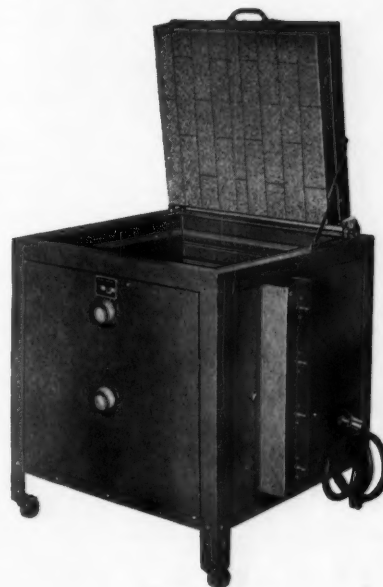
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## new & useful

**COMPANION GLAZE** to the Damerell "Flame" was recently introduced. Called "Serape Yellow" it can be mixed in varying proportions with the Flame to produce all intermediate tones from yellow through orange, tangerine, vermilion, to bright red. These glazes can also be applied over each other in irregular thicknesses to produce vertical "spills"; or a thin coat of one can be applied over a thicker coat of the other to produce "bleeds."

Write to the Damerell Manufacturing Co., Exton, Pa., for other details and for the names of local sources for these glazes. Please mention CERAMICS MONTHLY.

**NEW UNDERGLAZE** colors were recently announced by the Gare Ceramic Supply Co., 235 Washington St., Haverhill, Mass. Manufacturers of the Symphony color line, they call their new product "Symphony U. G.

If you have a product or a service you feel will be of interest to the readers of "Ceramics Monthly," send the pertinent information and illustrations (if available) to the attention of the Editor, "Ceramics Monthly," 3494 N. High St., Columbus 14.

Colors." Twenty new colors are available in two-ounce jars with suspension and binding agents added. For details write directly to Gare or to their sales representative, Ceramics by Marlene, 1214 E. St. George Ave., Linden, N. J. Please mention CERAMICS MONTHLY.

**REVERSIBLE THROWING HEAD** is a unique feature of the inexpensive potter's wheel manufactured by the Master Mechanic Mfg. Co., according to the firm. The potter can cast his plaster bats directly in the reverse side of the throwing head, which has built-in joggles; when the bats are used they are automatically centered and driven.

For details on the other features of this potter's wheel, write to the company at Burlington, Wisconsin, for their free circular, mentioning CM.

**FREE** element repair kit is being offered by Model Ceramics, Inc. If the wire element in your electric kiln has broken, send your name and address along with the make and model number of your kiln to Model Ceramics, Inc., 772 N. Main St., Akron, Ohio. When writing, say you saw the announcement in CERAMICS MONTHLY.

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NEW COLORS!

NEW COLORS!

IN TRANZ

T-23 Onion Blue

T-25 Lady Pink

T-24 Peacock Blue

T-26 Delft Blue

In DETAIL U. G.

In REGULAR U. G.

L-11 Coral

141 Candy Pink

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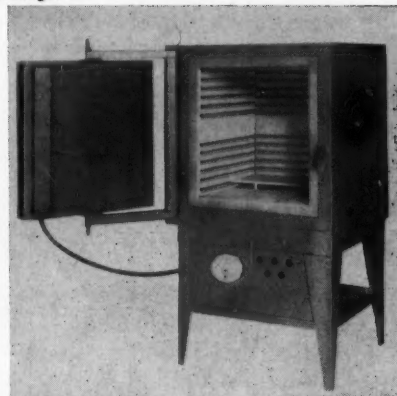
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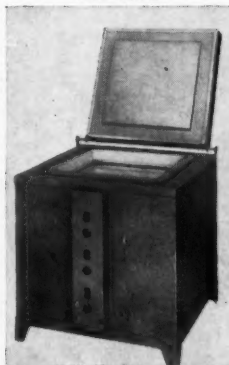
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(Please turn to Page 28)

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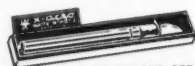
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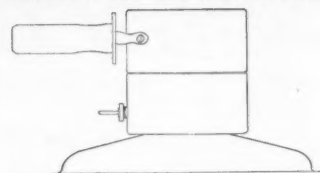


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bowl at left, by the author, is in-glazed. the plate below (xvi century, italian), is traditional majolica ware. how each of these decorations is achieved is told in the text below.

the majolica technique:

# In-Glaze Decoration

by THOMAS SELLERS



Photo: Ferdinand Howald Collection, Columbus Gallery of Fine Arts

**A**PPLYING a decoration directly on an unfired glaze and firing both glaze and decoration at the same time is the technique known as "in-glazing." This technique was most widely used in making majolica pottery where colorful decorations were brushed on an unfired, opaque white tin glaze. Decoration on unfired glazes other than opaque white, therefore, should be called "in-glaze" rather than majolica.

(In the strictest sense, a decoration is majolica only if the base glaze is tin bearing opaque white. I feel that any piece can be called majolica if the decoration was applied to an unfired opaque white glaze, whether the glaze obtained its opacity from tin or from some other material. Decorating on base glazes other than opaque white,

should be called in-glazing.)

Majolica ware was first made by the Arabs, and at the time of the Saracen conquest it was introduced to Europe through Spain. The name by which the richly colored and ornamented pottery came to be known is derived from Majorca, the island off Spain, where a great deal of the ware was produced.

In-glazing has several advantages as a decorating technique. It offers the ceramist a choice of a wide variety of glazes upon which to decorate; you are not restricted to the use of a transparent glaze, as you would be if decorating with underglazes. If you wish to cover the body completely, you need not go through the intermediate step of applying an engobe; any opaque glaze will accomplish that purpose for you. If you decide you would like to decorate a piece after it has been bisqued and the color of the body does not lend itself to your decorating plans, in-glazing is an ideal solution. (An engobe could not be used, since the piece has

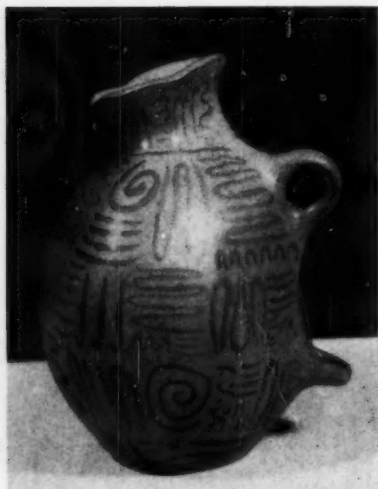
already been bisque fired; and although an overglaze decorating technique could be used it would require two firings.) These advantages, coupled with the fact that an in-glaze decoration cannot wear off a glazed surface (since it is an integral part of the glaze itself) and that only one glaze firing is necessary, make the technique a valuable addition to everyone's decorating repertoire.

It does present one disadvantage. The potter who uses in-glaze decoration must have a sure hand and apply the decoration without hesitation. Mistakes cannot be rubbed off as in overglaze decorating. If you make an error, your only recourse is to remove the base glaze and start over again.

**T**HE FIRST step in the in-glaze technique is the selection of a base glaze. Most commercial suppliers have a majolica glaze series. You will find, however, that any opaque glaze that does not become fluid enough to

Mr. Sellers is director, and ceramics instructor, at the City Recreation Arts and Crafts Center at Columbus, Ohio.





**POTTERY** by the author reveals his preference for in-glazing as a decorating technique. For the pitcher, he brushed a black



stain preparation on an unfired, stony mat glaze. The vase was decorated with a white glaze applied to an unfired, black base glaze.



The covered bowl may be considered as being majolica because the decoration was brushed on an unfired, opaque white, glaze.

flow during firing will answer the purpose. If you are in doubt as to the adaptability of one of your glazes to this technique, make a simple test on a tile and thus avoid ruining one of your pots.

The next consideration is the choice of the decorating medium. Dry underglaze colors if mixed with frit are ideally suited; the liquid underglazes are also excellent and can be used without any additions. Some of the commercial engobes can be used, if mixed with a frit, but here again it would be advisable to experiment first on a test tile.

If you choose to work with dry underglaze colorants, the procedure would be as follows:

Mix equal portions of the underglaze color and a frit\* (the latter acting as a flux to insure proper firing). A small amount of each, about the size of a pea, makes a quantity sufficient to cover a large area. These ingredients are ground on a piece of glass or

marble slab with a fettling or palette knife until an intimate mix is obtained. A few drops of glycerine, as a binder and a lubricant to make brushing easier, are added, making a paste with the consistency of thick oil paint. Water from your brush thins the preparation; the thinner it is the lighter the color will be. The color should not be prepared, of course, until you are ready to apply your decoration.

The base glaze can be applied to the pot by any of the various methods as long as an even coating is obtained. It should be allowed to dry for about fifteen minutes and then sprayed with a solution of gum tragacanth or of table syrup and water. (For the latter solution use one teaspoon of syrup to approximately one cup of water and mix thoroughly by shaking or stirring.) Care should be taken not to spray the solution so heavily that it flows down the sides of the pot and mars the glaze. The object of the coating is to present a less porous surface for decorating and to protect the glaze surface during handling in the course of the decoration process. After applying the coating, allow the pot to dry overnight before decorating.

A long-shanked brush preferably an inch or more in length is a good one to use for your decorating; an oriental decorating brush available from most ceramic suppliers is excellent. You will find the banding wheel or whirler to be a most convenient aid while you decorate, especially for spirals or bands, because it can be turned as you work.

Since a mistake cannot be corrected, plan your decoration well in advance. Many potters like to practice the brush strokes on the bisque pot before it is glazed, using water instead of colorant. Brush strokes made quickly and freely

are the most effective. If you wish, you can sketch your decoration lightly in pencil, directly on the pot. The pencil marks will burn out without ill effect.

ONE of the pleasures of working in ceramics is the chance for experimentation; in-glaze decoration is no exception. Using the technique presented here as a springboard, you can go on to many variations. The following are only a few of the possibilities.

Instead of a frit, use an equal portion of base glaze with ceramic color.

Use a transparent base glaze over a colored clay body and decorate with any opaque glaze to which glycerine has been added.

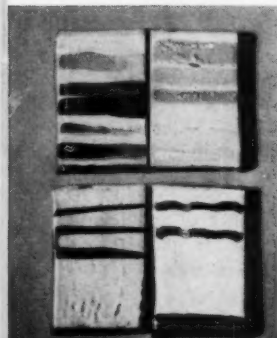
Decorate with a contrasting glaze over an opaque background glaze.

After a decoration has been completed, make it blend with the background by spraying a very light coat of the base glaze over it. (This same idea can be used if, after firing, a decoration is considered harsh.)

Achieve a dry brush effect (of tones rather than solid color) by using very little colorant on the brush, the brush being almost dry with the hairs separated. The same effect can be obtained by decorating directly over the glaze without the addition of a gum or syrup coating.

For the in-glaze technique, some potters prefer a stony mat glaze as the base because it will not flow in firing. If you prefer the traditional majolica technique, however, an opaque white glaze should be the base. Good examples of the latter type of ware may be seen at most museums and in many ceramic books. By observing what others have done with in-glazing, we can visualize its widely varied possibilities. ●

\*All frit companies are able to supply frits which are suitable for the color preparation; ceramic color companies have a flux prepared especially for this purpose. (Suggested frits: Pemco, P-54 and P-806; Ferro, 3124 and 3134; O. Hommel, 164 and 242.)



**MAKE TESTS** on small tiles to avoid ruining good pots. The tiles on top were tests of new stains and engobes on a reliable base glaze. On the pieces below, the author tested new glazes. Note the wavy line, caused by the glaze running excessively during the firing.



Like other bodies, porcelain is versatile. The pieces shown here were (starting at top)—drain cast, Arthur Roy; hand built, Warren Maxfield; solid cast, the author; wheel thrown, Harriet Brisson.



# PORCELAIN

## for the studio potter

by DOROTHY W. PERKINS

This article, the first of two about porcelain and its possibilities for the studio and hobby potter, is a general discussion of the subject. It attempts to answer questions without being overly technical. In the second article, studio porcelain bodies and glazes will be discussed as possible starting points for experimentation.

**W**HITE-FIRING, translucent bodies known as porcelain, whether firing at cone 9 to 12 or lower, provide another—and an exciting—material with which the studio or hobby potter may work. Although they are not necessarily superior to all others, porcelain bodies have certain characteristics which may be used to advantage. The way they are used in designing and treatment is the only basis on which their excellence—or lack of it—may be judged.

The prestige which the Western world continues to accord porcelains is, in my opinion, entirely historical in conception. We are influenced, even to this day, by the awe and desire with which Europeans regarded the first white-bodied, translucent Chinese wares brought home by early explorers of the East. Aside from this historical influence, however, we have a profound respect for the achievement of the Chinese in developing the original porcelain bodies. We have respect, also, for the vast technological advances made in Europe as workers there tried to duplicate China's white clay. (The name "china" was given to white translucent ware since all such known ware had come from that country; the word "porcelain" is derived not from the Orient but from Europe.)

Dorothy Perkins, a CM contributing editor, is Ceramic Instructor at the Rhode Island School of Design.

Europeans had always had red clay pottery of varying degrees of hardness, and some stoneware, but the ability to produce porcelain, or a suitable approximation of the Chinese product, led to preference for it. Red clay and stoneware were immediately placed in an inferior position, although many potters today agree that in design and sensitive handling the "common ware" often surpassed the porcelains. Technically, however, Europe's achievement of white, translucent bodies was an important addition to ceramic knowledge. Greater purity of materials, greater firing control, greater knowledge of designing for the physical possibilities of a material—all were achieved through attempts to emulate the Chinese white body.

How the quality of preciousness came to be attributed to Chinese porcelains by Europeans is easily understood. And we should understand, too, that many of the European porcelains produced in the 18th and 19th centuries were technical excellencies *made to be admired rather than used*. Such a basis for production led inevitably to an overworking of the body and an overdecorating of the forms. Although the long-lasting effects of over-expressing technical achievement are still apparent, the body in itself was a notable achievement.

**T**HE porcelains of the Chinese and of the Europeans differed in body, and came to be known as "hard paste" and "soft paste," respectively. Chinese porcelain, or hard paste, is composed of kaolin, a white-burning clay of low plasticity resulting from the decomposition of feldspar, and containing some of the feldspar itself. When fired, the feldspar fused, bringing the more refractory kaolin into fusion. The result was a very dense, glassy structure.

The mixture of kaolin and feldspar would be extremely short; that is, it would have very low plasticity and could not easily be thrown on the wheel which was the forming process used by the Chinese. Time, however, was not the inflexible ruler in those early days that (we think) it is now. The Chinese potter could, and did, prepare clay for coming generations, and left it to age in the wet state. Thus time did for them what we would not wait for it to do today—aging made the clay plastic enough to be workable.

The glazes the Chinese used were composed chiefly of feldspar, and some were high in calcium. Because the natural body and glaze materials were so similar, affinity between the two was extreme. Glaze and body matured (arrived at the desired top temperature) together, at about cone 12 to 16. The glaze became an integral part of the physical structure of the fired clay: it did not rest on the surface of the clay body. This was hard-paste porcelain, also termed "true" or "natural" porcelain.

When the first examples of Chinese ware reached Europe, the royal courts scrambled to be first with an imitation of it. The Europeans realized the necessity of a white clay as the principal ingredient of the body, and they eventually found it. Their solution to the matter of a flux, however, resulted in the use of materials more easily fused than were the feldspars of the Orient. Frits (ground, fired glasses) were sometimes used; other bodies were fluxed with the ashes of animal bones and became known as bone china. Thus soft paste bodies, sometimes called "artificial" or "fritted," were developed. They were bisqued to about cone 01, then glazed and fired to a lower temperature, about cone 06. The glazes used consisted primarily of lead, and did not form as close a bond with the body of the ware as did the Chinese feldspathic glazes. Fired, the soft-paste bodies were white and translucent to varying degrees.

**H**ISTORICALLY, then, the classifications "hard and soft paste" have been used in referring to porcelains but the terms are not widely used any more. The Whitewares Division of the American Ceramic Society approves a classification of white dinnerware bodies based upon translucence, mechanical shock resistance and percentage absorption. *A white burning body, with high translucency, medium to high mechanical shock resistance, and 0 per cent absorption is considered porcelain by this classification.*

For a comparison of porcelain ab-

sorption percentage with that of other body types, the above classification indicates: Porcelain, 0% absorption; Bel-leek China (differs from porcelain in that it contains an auxiliary flux), 0%; American Household China, less than .1%; American Hotel China, less than .3%; Bone China, .3-2%; Semi-vitreous Porcelain, .3-4%; Semi-vitreous China, 4-10%; Fine Earthenware, 10-15%; Majolica, more than 15%.

The reader can see, from this classification, that both "china" and "porcelain" have become accepted terms. China, today, usually refers to ware bisqued high and glazed at lower temperatures, while porcelains are bisqued low, with body and glaze maturing together in the glaze fire.

In addition to high translucency and no absorption, three indicators have been used to determine whether a body may be called porcelain. Both body and glaze should be impervious to scratching by steel; both body and glaze should be acid resistant; the ware should have a clear, bell-like ring when struck. Of these "tests," the first two could be carried out intelligently by anyone interested. But as a determinant, the third seems to have little to offer. The shape of a piece, and the point of maturity to which it was fired, have more influence on a bell-like ring than has the clay body from which the form was made. A bowl form rings best, and an earthenware bowl, fired to 0% absorption, could ring as prettily as a porcelain bowl!

Since porcelain has been given such prestige, does it have particular qualities which entitle it to higher regard than other clay body types? All body types have particular merits but it does not follow that one is more desirable or better than another. The effect and finished character desired by the potter help to determine which body he shall work with—red clay, stoneware, low-fire white bodies or porcelains.

Some potters may feel that porcelain has the quality of sophistication, that red clay does not often lend itself to sophisticated forms and treatments. If porcelain betokens sophistication for us, it is only because the historical background still influences our feelings about it. Red clay, depending upon design and treatment, can as well have the quality of sophistication. Again, some potters may hold that stoneware has a very definite, solid character suitable for ware that is less delicate than porcelain. Here, again, may not this idea of stoneware character be inherited from the past? Each clay or clay body type actually has innumerable possibilities—possibilities which have not even been touched. We will find them if we keep out of the rut of histori-

cally produced beliefs and leanings.

**E**XAMINING a porcelain body and its potential for us today (we limit ourselves to porcelains produced at the usual studio temperatures, cone 9-12, or possibly 14), we find these general characteristics and qualities:

1. Like other bodies, it is strong after firing to maturity.

2. The fired glaze does not rest in a glassy layer on the body, but becomes almost as one with it. This is due to the similarity of the natural materials used in body and glaze and to the glass-like structure of the body itself. It means that the glaze, on porcelain ware fired to maturity, will not chip off as readily as it will from other bodies on which glaze differs to a greater degree from body composition.

3. For casting purposes it usually deflocculates with ease, drain casts easily and quickly, solid casts only a little less easily.

4. It throws with difficulty, for beginners; aging and the use of plasticizers make it more workable.

5. It may be jiggered.

6. Although a porcelain body is not usually used in hand-modeling, its "open" character due to coarse-grained materials makes hand building less difficult than would be imagined.

7. Warpage difficulties may be encountered during drying or firing or both, especially in firing if the body is very dense (glasslike) at the desired temperature.

8. Except for the possibility of warpage, firing presents no special problems. Porcelains may be bisqued low (cone 09 or even as low as 012), glazed, then fired up to temperature, the glaze and body maturing together. It is also possible to bisque at the maturing temperature of the body, then to glaze at a lower temperature. Such procedure may be desirable if the body is a very glassy one and the form requires support in firing; it may also be desirable if certain color effects wanted in the glaze can be obtained only at lower temperatures. Otherwise, the low-bisque, high-glaze fire procedure is preferable: this method gives the best glaze and body bond.

Porcelain, like other clay bodies, has infinite possibilities for the studio potter. Contrary to a fairly common impression, a reducing atmosphere in the kiln is not necessary to make porcelain: the translucent bodies can be achieved by oxidizing atmospheres in high-fire electric kilns.

A second article on porcelain, to appear in a subsequent issue, will include specific information on preparing bodies and glazes, on firing, and on other factors pertinent to making this type of ware. ●



for tall, slender,  
one-section pots—

# throwing UPSIDE DOWN

by J. SHELDON CAREY



EVERY POTTER who throws on the wheel eventually wants to see how tall a pot he can throw, how high he can raise a cylindrical form of plastic clay. As experience and skill accumulate, he is able to pull the clay up to form pots twelve, sixteen, perhaps twenty or more inches tall. If, however, he wants an even taller pot of good weight and thickness, he usually throws it in individual sections which are then put together.

I have always liked tall, slender pots but I was not satisfied with making them in sections. Yet throwing with a single lump of clay, I could not raise a pot to the height I wanted to achieve. Pull and struggle as I would, using every ounce of effort, I always reached a limit short of my ambition. What is the difficulty, aside from my own shortcomings, I asked myself. A larger lump of clay gives me more material to pull upward, and stiffer clay allows for

---

Readers were startled, and intrigued, when Sheldon Carey presented the idea of throwing pots with legs in the April 1953 issue ("Innovations on the Wheel"). Now he introduces "upside-down throwing" as a way to make a very tall pot in one section. The method is unorthodox—but for Carey it works. The potter heads the Ceramic Division of the Design Department at the University of Kansas.



UPSIDE-DOWN throwing starts in the conventional manner with the wheel in upright position. The ball of clay is centered and opened, and then the wheel is inverted. Experimenting with upside-down throwing, Carey discovered that the clay holds to the wheel head without difficulty when the unit is turned over. The walls of the pot move down quite easily since he works with gravity instead of against it. His left hand, inside the pot, is used in the same way as in normal



thinner walls in the lower area of the pot. Yet there is always that limit.

The difficulty, of course, was the fact that gravity was working against me. Since it was not feasible to go to another planet where gravity would be less insistent, I considered making gravity work *with* me instead of against me. That is why I started to experiment with upside-down throwing as a way to make one-section pots tall enough to please me.

Under ordinary circumstances, a lump of clay thrown on a wheelhead stays in position because a vacuum has been formed which holds it there. I had first, then, to find out whether the clay would hold if suspended in a downward position. Using a conventional electric wheel, I centered and opened a medium sized ball of clay, turned the wheel upside down, and suspended it from the corners of two tables which had been set about two feet apart. The clay clung to the wheel head.

Starting the motor at low speed, I squatted under the

← TALL POTS have "a stately beauty and sculptural quality that I like," declares Sheldon Carey. "I enjoy them for their form alone. Since few people throw pots only as a way to make a living, most pots are thrown for the pure joy of giving life to innate clay. The potter, like the painter, creates a piece that, for him, says something—expresses an idea, a feeling—that dances, is alive. He does not worry about what the pot can be used for, and it is not difficult to find a place for an object you like. But if we insist that the tall pot must be used, I can see it as a container for a flowering branch or as part of a contemporary design for outdoor living."



throwing. In his right hand he holds a wet sponge; and as the surface of the clay dries, the sponge is squeezed for the additional lubrication that he needs. Throughout the entire procedure, Carey takes advantage of every possible means of bracing himself for better control. In the first photos, his left shoulder is braced against the box and table, and his right forearm is braced against the box on the other side. As the pot becomes longer, he braces his legs

against the legs of the table for still more control. When the walls have been thinned enough, he starts to stretch the pot; then he completes the neck. The last step—a final attempt to achieve even greater length. The author cautions: "Here is the stage when all can be lost, but it is the only way to find out how long the pot can be made." This particular pot, after shrinking four inches during the drying and firing process, finally stood twenty-seven inches tall.

wheel, moistened my hands, placed the left one inside the pot, the right one outside, and pressed—my hands went right through the side of the pot. The wheel head was now turning in the opposite direction; obviously, if I was to throw with my hands in their customary position, I would have to reverse the direction of the wheel.

The electric wheel I was using had a variable speed motor which could be adjusted by advancing and retarding its brushes. Removal of a small pin on the surface of the motor would reverse the wheel's direction and vary its speed. Using force and determination, I retraced my steps.

With the wheel once again in upright position and still turning in the normal, counter-clockwise direction, I centered and opened a ball of clay. Then I removed the pin from the motor, reversing its direction. Now, when the wheel was upside down, it would turn in the "right" direction for my hands.

**I**N THROWING, each potter has to find the position that gives him greatest comfort and stability. The first time I attempted upside-down throwing, I lifted the wheel and turned it over at table level. The physical strain required was so great that any working position thereafter felt good. But as I worked and the pot neared the floor, I had to raise the wheel by placing bricks between it and the table tops, a cumbersome and difficult operation. Later, I found that with two sturdy boxes on the tables (as in the photo at top right) the wheel could be set at a good working level for me. It was impossible, however, for one person

standing on the floor to lift the wheel to this height. I solved that problem by placing the upright wheel and its small bench on top of one of the tables and climbing up there to center and open the clay. From this level, the task of lifting the wheel, turning it over, and resting it on the boxes was not as difficult because the movement was down instead of up—but it was still hard work!

Although the system I had worked out, using the conventional wheel, was workable, it was far from being wholly satisfactory. The manual labor of lifting and turning over the heavy wheel was exhausting; there was no way of regulating the speed of the wheel satisfactorily once it was upended; nor was it possible to raise the wheel conveniently and gradually as the pot grew longer.

In view of these difficulties, the University of Kansas granted me a small research fund to construct a wheel which would lend itself to upside-down throwing. The new wheel is now in operation, and the strenuous effort previously required to manipulate the equipment has been eliminated. The wheel, mounted on the vertical shaft of a drill press, can easily be turned upside down and raised or lowered, and its speed can be regulated by a foot pedal. Sitting close to the floor on a low block, my foot on the speed-control pedal, arms braced against my knees—now I can throw with comparative comfort and efficiency.

I want to make certain improvements on the new wheel in the interest of smoother operation. A touch-button control would make it possible to raise and lower the unit even more easily than it can be done now. An adjustable





THE CAREY WHEEL (shown below, right) was designed and built by the author. Attached to the vertical shaft of a drill press, the new wheel can be raised and lowered easily. The entire unit is well balanced, making it a simple matter to invert; and the variable speed motor can be controlled by a foot pedal arrangement. In the

photos above, Carey centers and opens the clay while the wheel is upright; then he inverts the wheel, raises it to the desired height and proceeds, using the same upside-down technique he developed for the conventional wheel. As the pot lengthens, the wheel is raised. "This pot is thirty inches long—and it hasn't pulled apart yet."

armrest to steady the hands is needed. I want to construct a special wheel head on which a face plate can be clamped. The plate would function like a plaster bat; it could be removed with pot attached and, still inverted, slid on two parallel bars into the damp box to await finishing. With several of these plates on hand, the wheel could be in operation continuously.

**W**HETHER upside-down throwing has any spectacular merits, I do not know. I did find that the weight of the clay tended to keep the object centered, and water couldn't run to the bottom of the piece and thus soften the walls. An uneven lip could be removed without the chance of its falling in or on the pot. As the pot hung in its inverted position, it could be brush decorated easily: a stroke started at the wheel head could be completed in one downward, smooth motion without changing the angle of the brush. And, of course, it is the only way I have ever been able to throw a thirty-inch pot in one section.

Although I have been throwing on the wheel in the conventional way for twenty years, I have had too little experience with the new technique to predict its possibilities for the future. I hope someone can carry the research further than I have time to do; perhaps a graduate student can follow it through as a thesis subject and eventually refine the equipment.

Whether the idea is new I do not know. It seems to me, however, that in the last four thousand years some other potter, wanting to throw a taller pot, must also have found himself beating the law of gravity by throwing upside down. ●



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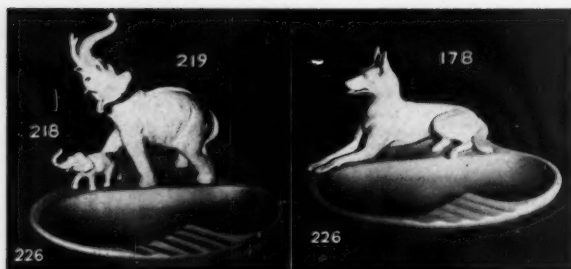
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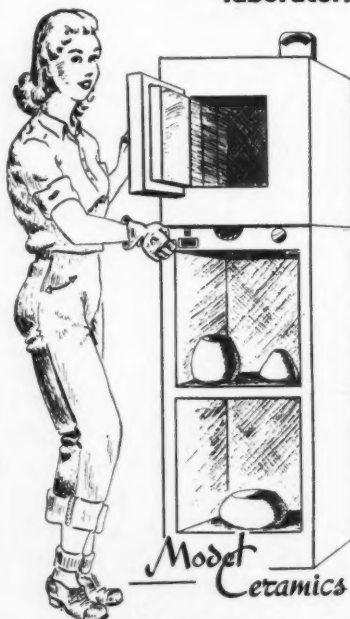
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## answers to questions

CONDUCTED BY KEN SMITH

**Q.** Can you give me some information on how the Mexican "pinata" is made? Is it fired or does it have a special construction in the green clay?

**A.** I would like to make one next year for our Spanish class at school. This year's unfired pinata fell apart too soon—as Gordo would say "with the weight of candy, nuts, and trinkets."

**A.** The Mexican or Spanish pinata is made of red clay and fired to a very soft bisque. The clay pot is generally handbuilt in the form of a good-sized olla. After firing, it is draped with gaily colored papers and feathers to resemble an animal or a bird. It is not necessary to use only a red clay; any clay will prove satisfactory if fired to a soft bisque. An unfired pinata would be much too fragile.

(A pinata is used in a party game by Spanish or Mexican children. The pinata is filled with candy, nuts, and the like and is suspended on a rope which has been thrown over a pulley. The pinata is pulled up and down as each child, blindfolded, takes a turn swinging at it with a stick. The pinata is easily broken when struck, and the contents fall on the floor—the children scrambling for their share.)

**Q.** White powder-like marks appear very often on my bisque ware. These marks seem to be fired into the piece and cannot be removed by sponging. Can you tell me what causes them, and how they can be eliminated?

**A.** This defect is known as "scumming." It can be removed from bisque ware by scrubbing the piece with a dilute acid such as muriatic. Several such scrubblings may be necessary because the scum may reappear.

It is most often caused by the presence of soluble sulphates in the clay. You can prevent this type of scum from forming by adding approximately one half per cent (by weight) of barium carbonate to the dry clay and mixing it well before adding water.

**Q.** When a correction has been made on a gold decoration, sometimes after firing a purple discoloration will appear where the gold was removed. Is there any way to "erase" it from the fired piece?

**A.** Several etching creams for removing this purple discoloration are commercially available. A small amount rubbed on the defect will remove it instantly. Be sure to follow the manufacturer's instructions because the creams are acids and should be used with caution.

**Q.** Can ordinary glazes be used for enameling copper and other metals?

**A.** No. Enamels for metals are specially prepared materials made for that specific use. These are not the same as glazes which are prepared for use on clay bodies.

Direct your inquiries to Questions Editor, "Ceramics Monthly," 3494 N. High St., Columbus 14, Ohio. Please enclose a stamped reply envelope. Questions of general interest will appear in this column.

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# Press Molds

by JOHN KENNY



THE CERAMIC SCULPTOR can make plaster molds of the forms he creates in clay and from these molds make faithful reproductions of his work. He is not limited to the use of casting slip to make his reproductions; he can make plastic clay take the shape of his mold, too. One type of mold which can be used with plastic clay is the *press mold*.

When a press mold is used, the clay is pressed into the inside and allowed to remain until it starts to dry. As it dries, the clay becomes firm enough to hold its shape and, at the same time, it shrinks slightly so that it can be taken out of the mold without difficulty provided there are no undercuts. Of all the molds used by the ceramic sculptor, the simplest to make is a *one-piece* press mold for a low relief plaque or an incised tile. To gain experience in making replicas of our work, let us start with a tile to be reproduced in a press mold.

1. Draw a full-sized design for the tile on a sheet of thin paper. Remember to allow for shrinkage. If you want to end up with a 6 by 6-inch tile, make your drawing about  $6\frac{3}{4}$  by  $6\frac{3}{4}$  inches. You may find that you get better results by making a series of rough drawings, altering them until the design pleases you, then tracing the final form. Many commercial designers work this way.

Roll a slab of clay about  $\frac{1}{8}$ -inch thicker than you want your finished tile to be. Use two strips of wood as guides to get the thickness right.

Cut a square of the right size out of the slab and round the corners slightly. Lay your sketch on the clay and go over the outline of the design with a sharp pencil. This reproduces the design on the clay.

2. Cut out the background on your



tile with a wire loop tool, leaving the design in relief. Try to cut to an even depth and avoid making undercuts. The portion of the design not cut away must be slightly wider where it joins the background; this provides a *draft* so that pressings will come out of the mold easily. The sides of the tile itself need not taper.

When the background is cut out, do some more modeling on the design. Skillful treatment of the edges of such a relief can give the appearance of great depth to a design which is actually all on one plane, but don't make the design complicated. Model only enough to suggest three-dimensional quality, eliminating the cut-out look. You are working with clay so avoid sharp corners.

Lay a flat board lightly on top of the tile to make sure that the tops of the various parts of the design are in the same plane. Now the tile, when leather hard, will be ready to serve as the model for your plaster mold. (Directions for mixing plaster will be found on page 24.)

3. When preparing to make a mold, place your model on a sheet of glass or on a smooth board. If you use a wood surface, coat it with a size such as oil or soap, to prevent the plaster from sticking to it.

Some kind of retaining wall must be set up to confine the plaster and to keep it from flowing all over the table. For work in which the depth is not great, a clay retaining wall is satisfactory but as height becomes greater, the pressure on the wall increases so that more strength is needed. Use wood or building paper when you pour plaster to a depth of three inches or more, and reinforce the wall with nails (if wood) or twine (if paper). Press a coil of clay around the base of the retaining wall to keep plaster from seeping out.

To make sure the plaster comes in intimate contact with all of the details of the model, spoon out enough plaster, while it is still quite thin, to cover the face of the model. Then pour the rest of the plaster.

4. When the mold is thoroughly dry, you are ready to reproduce your original tile. Tiles are less apt to warp if the clay from which they are made has a liberal portion of grog added. Before using your mold, then, prepare a tile body by wedging together two handfuls of clay and one of grog. Wet the grog first to make wedging easier.

Form the clay into a shape almost like that of the finished tile but slightly smaller so that it will go into the mold easily. Make the top as flat and smooth as possible.

5. Put the clay into the mold, smooth side down, and press it firmly

with the thumbs. Press from the center outward and exert enough pressure so that every crevice of the mold is filled. The center of the back of your tile should be lower than the edges, and there should be a rim about half an inch thick at the sides. Press the clay so that such a rim is formed.

6. Cut off excess clay with a knife, leaving an even footing for the tile. With a wire loop tool, cut a series of grooves in the back of the tile. These will help it dry without warping. Allow the clay to stand in the mold for about ten minutes, then remove it by turning the mold over and tapping it gently on the table.

Sometimes the first pressing sticks in the mold and has to be dug out. If this happens, check the mold to make sure it has no undercuts; if you find any, remove them with a knife. Dust the inside of the mold with flint or talcum powder and try again. This time it should work.

A tile made in this mold is shown on the facing page.

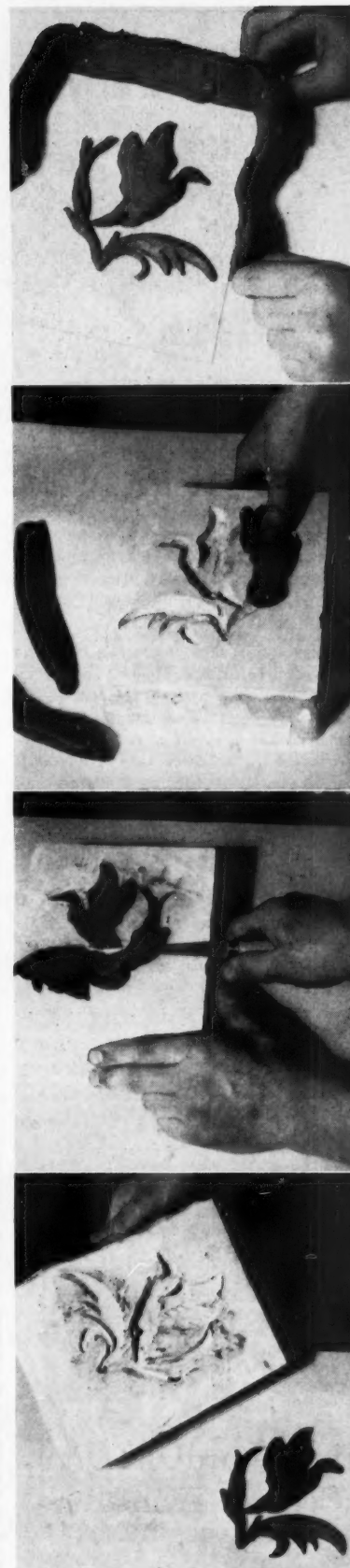
**S**IMPLE sculptured designs of animals, abstract shapes and other forms modeled in low relief or incised may be reproduced by using a one-piece press mold. A similar type, called a *sprig mold*, is used for pressing small ornaments and it can be used for making clay decorations to be applied to pottery.

The flying bird ornament shown at right was made in a sprig mold. The bird was modeled in clay and placed on a sheet of glass. When casting plaster over small forms like this, the back of the ornament should be moistened and pressed firmly on the glass to keep it from floating away when the plaster is poured. When the mold was ready, the ornament was reproduced quickly. Rolls of clay were pressed into the design, excess clay was trimmed off, and the piece was removed from the mold.

Another type of sprig mold may be made by cutting a design directly in a block of plaster. A gouging tool similar to that used for cutting linoleum block prints can be used for carving.

Plaster of Paris will make a mold of any shape at all but don't let this fact lead you astray and into the production of over-elaborate forms. Plaster molds are best suited to clean surfaces and the streamlined shapes of modern design. As you work with the material you will learn an important truth—the path to beauty is through simplicity. ●

SIXTH in a series, this article is drawn from Mr. Kenny's new book, "Ceramic Sculpture," published by Greenberg: Publisher, N. Y.





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# how to mix and pour PLASTER

by JOHN KENNY

**P**LASTER of Paris is a valuable aid to the ceramist since it is the material from which he makes various types of molds to reproduce his work. When water in the correct proportion is added, the plaster crystallizes into its original hard, rock-like state. Fortunately, this setting action is not immediate. The mixture of plaster and water is quite liquid at first; after a few minutes it starts to thicken, and continues to thicken until it enters its period of plasticity when it has the consistency of cream cheese; after this it becomes hard. Plaster poured at the moment it begins to thicken will flow over any surface, filling every crevice and faithfully reproducing each detail. Thus plaster can be used to make a mold, or negative shape, of practically anything at all; and from this negative, positive reproductions of the original form can be made in plaster or in clay.

The best type of plaster of Paris for ceramic use is *pottery plaster* because it gives a much smoother surface than does household plaster. It can be bought from ceramic dealers in five-pound cartons or in hundred-pound bags. Unless you put it in an air-tight container plaster won't keep, so buy just enough for each job and use it up immediately.

.....  
The proper mixing and pouring of plaster is of considerable importance if good results are to be obtained. To aid those who have not worked with plaster, this article is included in this issue as a supplement to the author's "Press Molds" appearing on pages 22 and 23. This, too, is drawn from Mr. Kenny's new book, "Ceramic Sculpture," published by Greenberg: Publisher, N. Y.

In mixing plaster of Paris, the plaster must always be added to the water. For mold-making the ratio should be  $2\frac{3}{4}$  pounds of plaster to each quart of water. An excess of water will produce a soft crumbly substance, too weak for a satisfactory mold, while an excess of plaster will set in a hard, dense mass, not absorbent enough for mold work. It is advisable, therefore, to measure the water and weigh the plaster each time you mix a batch.

**W**HEN you have acquired experience in plaster casting, you will be able to estimate the amount needed for a mold, but until then you may have to do some computing. One quart of water plus  $2\frac{3}{4}$  pounds of plaster will fill a volume of 81 cubic inches. Keep this figure in mind and when you are ready to pour a mold compute the volume within the retaining walls in cubic inches, divide by 81, and the answer will be the number of quarts of water to start with. For example, if the retaining walls enclose a space 10 by 10 inches and the mold is going to be about  $1\frac{1}{2}$  inches thick on the average, then the volume of plaster will be 150 cubic inches. Two quarts of water plus  $5\frac{1}{2}$  pounds of plaster will, therefore, be ample.

Put the water into a clean container and sprinkle the plaster into the water. It is important to sprinkle it so that no lumps form. If you do not have a scale and must estimate the amount, continue to sprinkle plaster into the water until enough has been added to form a cone-shaped mound above the surface. Allow the plaster to stand for about two minutes so that it can soak into the water. This action is called slaking. The slaking period is im-

(Please turn to Page 30)

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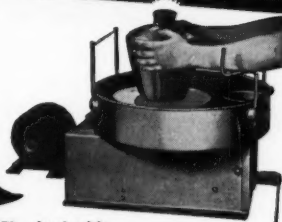
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## ceramic counsel

by *Edgar Littlefield*

### Place Cones in the Kiln

"No," said the young pottery-hopeful, while describing his plans for a pot-shop, "I'm not going to fool around with cones. I'm going to install an electric pyrometer in my kiln so I'll know the temperature I'm firing to."

If that remark can be taken as a fair sample of this would-be potter's ceramic knowledge, it promises little success for his venture. It suggests that he is not familiar with the nature of firing and with the maturing of bodies and glazes which is basically a process of progressive melting. Ceramic mixtures, unlike metals, do not have sharply defined melting points. Instead, some of the ingredients begin to melt first; these, with increases in time and temperature, dissolve increasing amounts of other ingredients.

Time is of great importance. We can speak of lead as having a melting point of 621° F., but we cannot make such a definite statement about a ceramic mixture. The information that a certain glaze or body should be fired to 2000° F., is, therefore, insufficient unless the temperature reference is tied to a definite firing schedule (introducing the time factor). A porcelain body may be properly vitrified when fired quickly to 2400° F. It is quite possible that the same body, fired slowly, would reach the same degree of vitrification with a peak firing-temperature of 2330° F., or lower. To bring about the desired results in firing ceramics certain minimum heat treatments are required. In general and within limits of practicality, this heat can be of high intensity for a short period of time or of lower intensity for a longer period, the important thing being the total heat involved. Heat and temperature are not synonymous. Heat is a form of energy while temperature is an index of the intensity of that energy at a given moment.

Pyrometric cones are so compounded

that the time element is automatically taken into account; that is, they indicate the effect of heat-work expended over a period of time. Being composed of ceramic materials, their behavior parallels that of bodies and glazes, thus providing a good guide to the progress of maturation in ceramic ware.

Manufacturers of pyrometric cones supply tables showing approximate cone-temperature relationships; they recognize the time factor by presenting two sets of temperatures, one for a slow rate of heating and one for a fast rate. The fast-rate temperatures shown are always considerably higher than those given for the slow rate. Cone 1, for example, deforms at 2057° F., when fired at 36° F., per hour but when fired at a rate of 270° F., per hour, its deformation point is 2120° F.

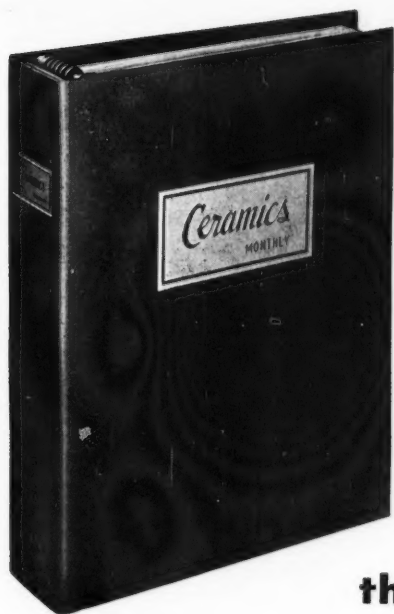
This article is not meant to discourage studio potters from using pyrometers. They are extremely valuable adjuncts when properly used—for example, in checking on the progress of a firing in its early stages and in controlling the rate of cooling. It is even possible to install an elaborate pyrometer system which will cause a firing to follow a predetermined course and also make a time-temperature record on paper of the entire firing cycle. This kind of equipment is too costly, however, to be considered by the average studio potter. Theoretically, such an installation could function without the use of pyrometric cones but it is interesting to note that cones are usually used in such set-ups, often as a check on the pyrometer.

Many false notions about the use of pyrometric cones exist. Some ceramists have, to their sorrow, attempted a small economy by re-using cones which did not fall over in a previous firing. Such cones should be discarded; the previous heating caused enough change to make them unreliable for re-use.

One person, apparently under the illusion that cones had the magic power to limit firings, exclaimed, "But the kiln couldn't have fired higher than cone 6! That was the highest cone in there!" Cones as such cannot control the firing; their behavior must be noted and acted upon by the human agency.

This is the first of a series of monthly theoretical discussions by Mr. Littlefield. If you have a pet problem you would like to have aired in this column, write CM.





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## itinerary

(Begins on Page 8)

Ohio counties and two nearby Michigan counties (Toledo retail trading area); also to former residents of Toledo and environs. Jury; basic entry fee: \$3; unlimited number of entries accepted for ceramics and other craft classifications. Awards. Entry dates: April 1,2,3. For further information, write Mrs. James E. Vogel, 2056 Parkwood Ave., Toledo 2.

### OREGON, Portland

May 13-June 12

Northwest Ceramics Fifth Annual Exhibition of pottery, sculpture and enamels, at Oregon Ceramic Studio. Work produced during twelve months preceding date of entry; open to residents of British Columbia, Idaho, Montana, Oregon and Washington. Jury; entry dates, April 12-26. Write studio at 3934 S. W. Corbett Ave., for information and blanks.

### WEST VIRGINIA, Huntington

April 11-May 2

Second annual Exhibition 80 at Huntington Galleries. Open to artists and craftsmen over high school age, within fifty-mile radius of Huntington, members of Tri-State Creative Arts Assn. All mediums. Fee: \$2, members; \$3, non-members. Entry cards due Mar. 20; work, Mar. 25. Jury; award certificates. Write Exhibition 80 at gallery, Park Hills, Huntington, for further information.

## WHERE TO GO

### ILLINOIS, Chicago

March 16-April 26

Mid West showing of Designer-Craftsmen U.S.A. (1953). Display of more than two hundred handcrafted objects by Americans includes ceramics. The exhibition was drawn from nine juried regional shows and first displayed at the Brooklyn Museum last fall.

### ILLINOIS, Chicago

March 16-April 26

An exhibition of the work of Designer-Craftsmen of Illinois, Indiana, Michigan and Wisconsin shown alongside the national Designer-Craftsmen, U.S.A., exhibit at the Art Institute.

### MASSACHUSETTS, Northampton

March 1-22

Textiles and Ceramics exhibition at Smith College Museum of Art. One hundred or more examples of distinguished ceramics and textiles included in display; this traveling exhibition is a selection from the Fourth Biennial of the Museum of Cranbrook Academy.

### NEW YORK, Buffalo

March 3-April 4

Ceramic work by craftsmen in fourteen Western New York counties included in the 20th Annual Western New York Artists show at the Al-bright Gallery, 1285 Elmwood Ave.

### NEW YORK, New York

through March 10

Ceramic sculpture, pottery, enamels

and glass pieces comprise the 60th Annual Exhibition of the New York Society of Ceramic Arts, at the American Museum of Natural History. Work is displayed in room settings created by New York designers. Demonstrations and lectures, Saturday and Sunday afternoons.

### NEW YORK, New York

through March 21

Ancient Art of the Andes exhibition at the Museum of Modern Art includes textiles, jewelry, pottery from 1400 B.C., to the Spanish conquest in the 16th century.

### TENNESSEE, Memphis

March 1-22

American Craftsmen, traveling exhibition, at Memphis Academy of Arts, 690 Adams Avenue. More than 100 examples of ceramics, enamels, silver-smithing and other work by outstanding contemporary craftsmen are included in this show sponsored by Smithsonian Institution.

### TEXAS, Houston

through April 4

Comparative exhibition of ceramic stoneware includes examples from China's Sung Dynasty and contemporary Swedish work. The Sung exhibit contains specimens from private collections and Eastern museums; display assembled by Swedish Society of Industrial Design includes pieces by Friberg, Lindberg and Stalhne. At Contemporary Arts Association of Houston, 302 Dallas Avenue.

### WASHINGTON, Seattle

March 7-April 7

Northwest Craftsmen's Second Annual All-Crafts Show at the Henry Gallery, University of Washington. Pottery, enamel and ceramic sculpture included in exhibition which represents Idaho, Montana, Oregon, Washington and British Columbia craftsmen.

## SUPPLY AND EQUIPMENT SHOWS

Each year, the firms which manufacture, distribute or sell supplies used in the ceramics craft, display their products at extensive exhibitions in various sections of the United States. These shows constitute a market-place where dealers, ceramists and the general public may see and examine kilns, molds, glazes, tools and innumerable other types of equipment and supplies. To help CM readers keep up-to-date with the working materials that are available, five such scheduled shows are listed below:

May 6-9

Midwestern Ceramic Hobby Show at Cleveland Auditorium, Cleveland, O.

May 19-23

Great Lakes Ceramic Exhibition at Masonic Temple, Detroit, Mich.

June 2-6

Eastern Ceramic and Hobby Show at Convention Hall, Asbury Park, N. J.

June 23-26

Southwest Ceramics and Hobby Show at Electrical Building, Fair Park, Dallas, Texas.

July 28-August 1

California Ceramic Hobby and Gift Show at Municipal Auditorium, Long Beach, Cal.

# suggestions from our readers

## Plaster Mixing Bowl

A small convenient plaster-mixing bowl can be made by cutting a hollow rubber ball in half. This lends itself ideally to mixing small batches of plaster. If you forget to clean the



"bowl," the dry plaster can be easily broken away by flexing the soft rubber walls.

—J. H. Saling

Columbus, Ohio

## Kiln Stacking Aid

When stacking my top-loading kiln, I sometimes found myself nearly in the kiln trying to see whether any of the pieces were touching each other. By

### Dollars for Your Thoughts

CM will pay from \$1 to \$5 for suggestions used in this column. Be sure to include photos and sketches if applicable. All items of interest to ceramists are carefully considered.

holding a small hand mirror down in the kiln, I can now see exactly how close the pieces are to each other and find I save much firing space and loading time.

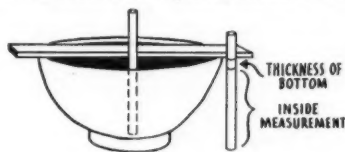
Many places which are impossible to see from above are immediately visible when the mirror is held at shelf level.

—Marion C. Tankersley

Denver, Colo.

## Measure the Thickness

You need not guess at the thickness of the bottom of a piece and risk either



tooling through the piece or leaving the bottom too heavy.

With a ruler or stick, measure the inside up to the rim and then measure the outside up to the rim. The difference between the two measurements is the exact thickness of the bottom. Knowing this you can tool the foot or bottom to the exact thickness you wish.

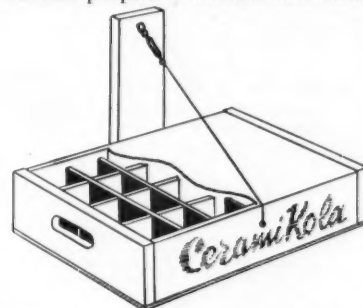
I find it helpful to use a stick across the top of the piece to facilitate measurement of the inside. Remember, however, to mark off the measurement at the lower edge of the stick.

—(Mrs.) John D. Wick

Newton, Mass.

## Sturdier Wedging Board

In your December "Suggestions" column, you mentioned using a flat fruit box for making a portable wedging board. In our workshop, we use for this purpose a wooden soft drink



delivery case, and it has proved to be very satisfactory.

The delivery case is much sturdier than is a fruit box, and the partitions inside add even more to the strength of the entire unit.

Plug the grip holes on each end of  
(More Suggestions on Page 31)

## Olin Russum advocates free brush decorations

In his ceramic class at the Baltimore Museum of Art, talented Olin Russum encourages free expression in pottery. Although some of his students are artists in their own right, others need guidance in decorating ware.

Beginners must have dependable materials to minimize early disappointments. Pemco Pasgobes were developed especially for these students. Pasgobes are far easier to work with than underglaze colors and are more consistent than engobes. They can be thinned to slip consistency for fluid application with a big brush. Pasgobes won't absorb the glaze or crawl. For opaque decoration, two coats of Pasgobes give excellent covering power. In addition, Pasgobe is the perfect medium for sgraffito work, when applied thickly.



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## how to mix and pour PLASTER

(Begins on Page 24)

portant for if you start to stir too soon,  
the plaster will form a lumpy mass  
difficult to make smooth. If water re-  
mains on the top after the plaster has  
settled, it means you did not use  
enough plaster. Don't try to add any  
more but pour off the excess water  
carefully before you start to stir.

FOR stirring, use your hand or a  
large spoon but in either case stir  
from the bottom and try to get all the



bubbles out of the mixture if possible.  
Don't whip the plaster (that will put  
more bubbles in), but stir gently and  
agitate the entire mass. As you stir you  
will feel the mixture start to thicken.  
When it reaches the consistency of  
heavy cream, thick enough so that your  
finger leaves a slight mark as you draw  
it over the surface, then is the time  
to pour.

Plaster must be poured quickly and  
smoothly, without splashing. Take care  
to cover the entire surface of the model,  
leaving no vacant spaces. If the model  
has delicate detail, use a spoon or brush  
to put a small quantity of plaster on it  
first. If you do this, dip this bit of  
plaster a little sooner than usual, while  
it is still fairly thin.

When plaster has been poured, the  
working table should be jarred vio-  
lently several times in order to loosen  
any bubbles which may adhere to the  
model. As these bubbles rise to the  
surface, blow on them to break them.  
The plaster soon becomes hard, and if  
you touch it you find it warm. As soon  
as it starts to cool, the setting action is  
finished; it is safe now to remove the  
mold from the model.

A plaster mold is not ready for use  
until it has dried out thoroughly, a  
process which may take several days.  
Drying can be hastened if the mold is  
put near a warm radiator, but don't  
let it get too hot or it will start to  
crumble. You can tell when a mold is  
dry enough to use by holding it against  
your cheek; if it feels cool it is still  
damp. ●

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## suggestions

(Begins on Page 29)

the box with clay, and then fill the box to the top with a good plaster mix. When the plaster has set, remove the clay plugs and screw a strong piece of wood to the side of the case to hold the wedging wire and turnbuckle.

The grip holes on each end of the case make the wedging board easy to handle when it becomes necessary to move it.

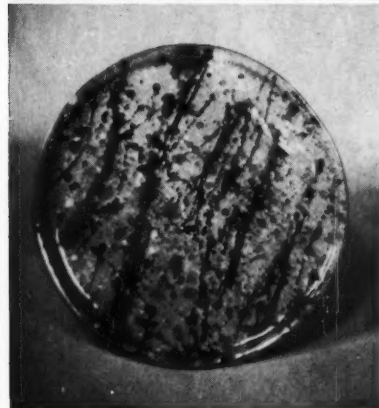
—Gary Ceramic Guild

Gary, Ind.

### Spatter Glazing

Spontaneous decorations, with no two alike, can be obtained by spattering contrasting colors on a piece of bisque or greenware. There are several ways to obtain the spatter effect, each one giving a different pattern.

A nail brush or the end of a scrub brush can be dipped into glaze and



spattered on a piece of ware by running your thumb across the stiff bristles. A slightly different effect can be had by rubbing the brush across the face of a wire screen.

A different pattern will result if you dip a tooth brush into glaze and rap the brush handle sharply against a stick. Another interesting effect comes from dipping the fingers in glaze and flicking the hand in the direction of the piece.

A very fine spatter pattern can come from a spray gun—either the power spray or the hand spray. Use a thicker glaze than you normally do and make the gun sputter rather than spray smoothly.

You can use underglazes for the spatter effect or some of your cover glaze which has been stained with ceramic colors. These can be applied directly to the green or bisque body or to a coating of unfired glaze. In either case, you will find it helpful if you apply a very thin coating of clear glaze over your spatter pattern so that the pattern will not be smeared during subsequent handling of the piece.

—J. H. Saling

Columbus, Ohio

### Glazing Aid

When spraying or brushing a white clay body with transparent or white glaze, it is almost impossible to tell when the piece is evenly covered. A



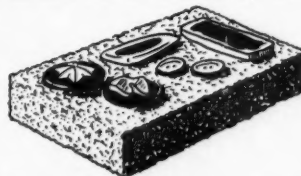
few well-aimed pencil marks, drawn on the piece of bisque ware, will give you a pattern to cover with the glaze. No tell-tale marks will be left after the firing, and no special equipment is needed.

—Marion C. Tankersley

Denver, Colo.

### Stilting Small Pieces

To eliminate the tedious stilting of many tiny pieces such as buttons, pins, etc., they can be placed on small mounds of kiln wash and fired in that manner. I find, however, that these small pieces can be handled much more easily if they are placed in the kiln on a thin slab cut from an insulating brick. The soft insulating brick can be cut with a small saw or even a nail file. One brick will make four or five slabs and can be used many times.



If the glaze on the piece runs and the piece adheres to the slab, you can still pick it up easily and sand the soft bits of brick from the piece.

—Marion C. Tankersley

Denver, Colo.

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PIECES shown on these pages were in the Buffalo exhibition, and they were among the judge's selections for awards. Bowl at left

is by Lillian Meyer; footed ashtray, by Margaret Clark; teapot, by Helen Creighton. Pinch bowl, top, is the work of Irene Stell.

# SHOW TIME



**CHICKEN LICKEN**, a fairy tale sculpture by Mary Templeton, is made of buff clay and gaily decorated with underglaze colors.

A HOBBY GROUP that became the Ceramics Section of the Buffalo Museum of Science in 1947 recently held their sixth annual show at the museum. The group is devoted to "the creation of handbuilt ceramics and clay sculpture," and the work of its members was on display for over three weeks.

The show was not juried—all pieces submitted by the members were accepted for exhibition. And, unlike most shows, the work was divided into thirteen different categories: coil, drape, slab, and thrown pottery; underglaze, sgraffito, and pierced decoration; tiles; sculptured figures, animals, and busts; Chinese-inspired pieces; and miscellaneous.

Pieces were selected from each of the categories for awards; and in an effort to improve their work, the group asked the judge to evaluate the exhibition and make recommendations





WIDE variety in show is reflected above. The thrown bowl, by Mary Templeton, is of red clay with green glaze. The unglazed

head, by Neville L. Cocker, is of buff clay. Margaret Clark made the owl from pinch pots; and Mary Cornell's tile is underglazed.

which might prove helpful to the members. The judge's comments probably could apply to most amateur groups.

The members were advised to concentrate on the fundamental process involved in simple combinations of clay and glaze, and to work in fewer areas than the numerous categories in the show reflected. Some of the figures exhibited could have been more sculptural in feeling—and less whimsical. It was also suggested that the show might be jury-selected; and prize-winning pieces, "if prizes are a must," could be selected on a general basis rather than from special classifications. Encouraging to the group was the comment that the work showed improvement over past years.

The nucleus of the Ceramics Section membership took evening classes in ceramics at the Museum several years ago and, on the basis of their common interest in the craft, formed a hobby group. They met at first in the homes of members; by 1947, however, the group had grown so large that the Museum arranged a special section for them. The Ceramics Section is in the "Anthropology" division of the Museum because, the members explain, "work in clay was one of man's earliest activities."

WHITE BISQUE polar bear took a prize in animal sculpture for Helen Creighton.

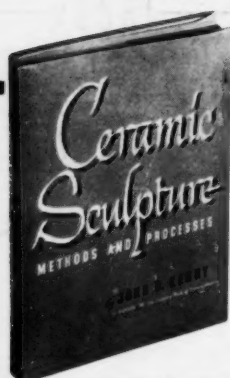


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